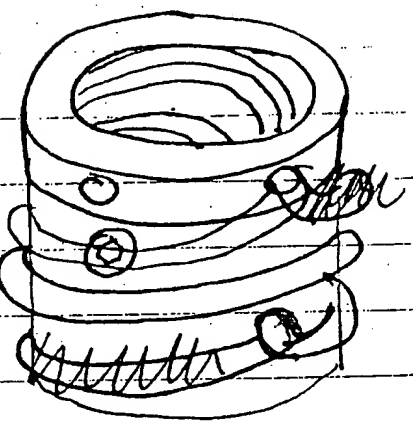
EXHIBIT B

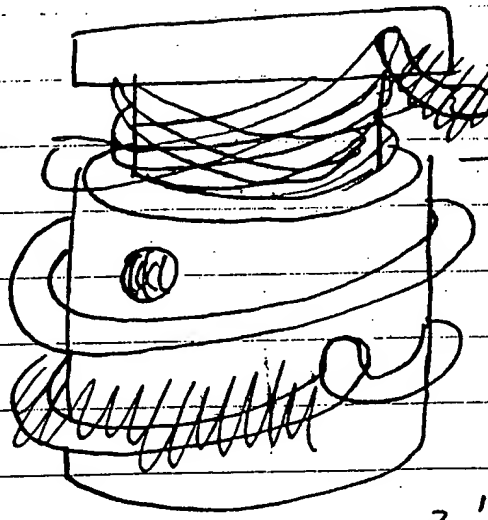
CONSTANT TENSION CARTRIDGE

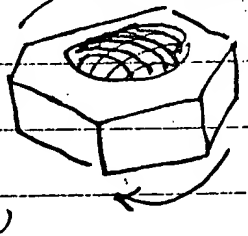
MARCH 1998

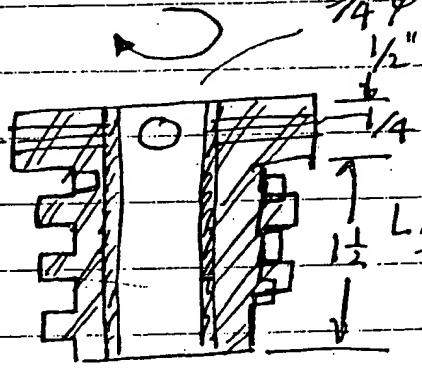
L.H. THDS. DIRECTION TO UNSCREW

HEX SOC. DOG POINT SET SCREW



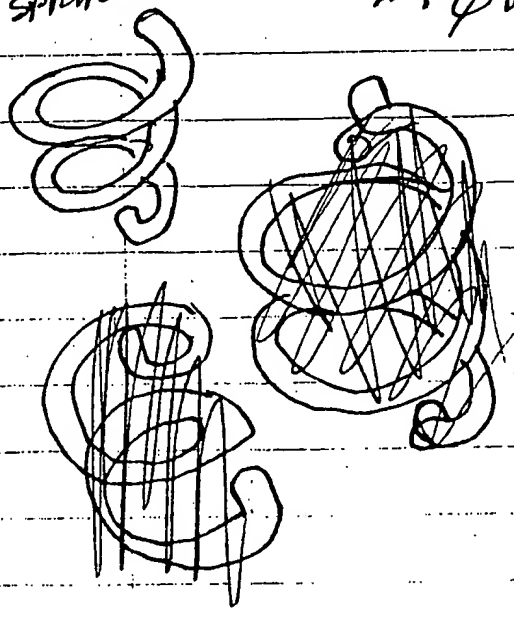


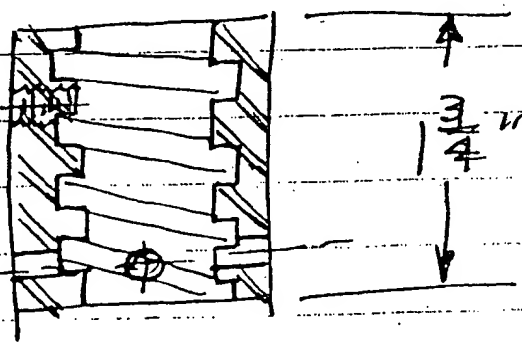




TORSION SPRING

DIM. OF A 1" ϕ WASHER



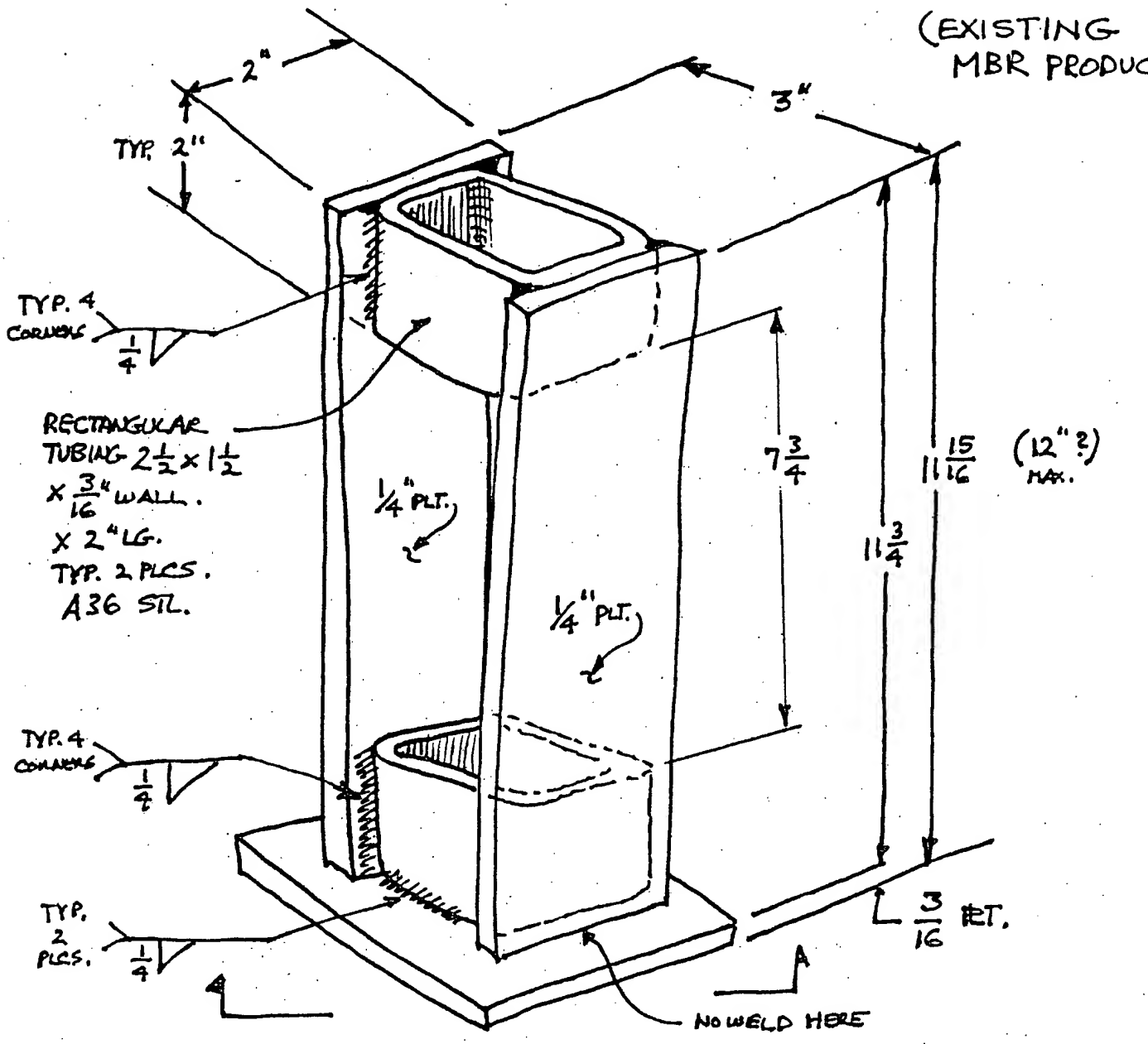


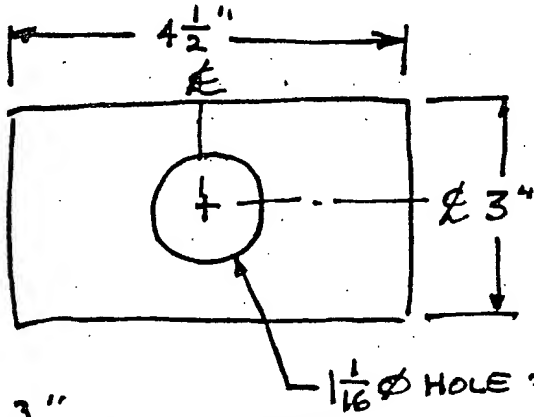
BRACKET – ENGINEERING SKETCH

MBR TIE DOWN SYSTEM (NO SCALE)

MAR 19 1998
By D. Lemon

(EXISTING MBR PRODUCT)





3/16" BOTTOM PLATE

MAT'L - A36 STL. OR EQUAL

APR 01 1998
CALC. BY D. Lowe

STRENGTH OF 1 3/4 - 4 ACME - 2G - LH THREADS:
USING AISI 1026 MECH. STL. TUBING.

1. E_S = 1.6145 P.D. MAX. − .00794 = 1.6066
   K_S = 1.4800 MINOR DIA. MAX − 1.5 × .00794 = 1.46809
   K_N = 1.5916 P.D. MINIMUM
   P = .250

TENSILE STRENGTH:

1A. STRESS AREA $= \pi\left(\frac{E_S + K_S}{4}\right)^2 = \pi\left(\frac{1.6066 + 1.46809}{4}\right)^2$

$= 1.85623\ in^2 - (1''\text{Ø CENTER HOLE AREA})$
$.7854\ in^2$

$= \underline{1.07083}\ (A_t)$

1B. SHEAR AREA $= \pi K_N \left[0.5 + \frac{1}{P}\ \text{TAN}\ 14\tfrac{1}{2}^\circ (E_S - K_N)\right]$

$= 3.1416 \times 1.5916 [0.5 + 4 \times .258617584 (1.6066 - 1.5916$

$= 5\,[.017456686] = \underline{.0873\ in^2}$

2. AISI 1026 STEEL = TENSILE: 55,000 PSI (S)
   YIELD : 30,000 PSI

P = LOAD TO BREAK THREADED PORTION OF SCREW IN TENSION.

$P = S A_t = 55{,}000 \times 1.07083 = \underline{58{,}895}$ LBS.
OR 29.5 TONS

USE STUB ACME THREADS

PROCTOR DEVELOPMENT

"RYERSON" STEEL CO. PRICE CHECK

APR 02 1998
D. Lemm

ITEM.		20 FT. RANDOM LENGTHS — COST EACH 20' LG.	20 FT. MAKES PIECES	COST PER FT.	20'-0" MAT'L COST NO. LENGTHS	EACH
1.	$2\frac{1}{4}$ O.D. X 1" I.D. X $2\frac{1}{4}$	$457.	(106)	$22.85/FT.	(1) ea.	$4.31
	SEAMLESS #1026 MECH. STL. TUBING (SCREW)	344.	(106)	17.20	(5)	3.24
		319.	(106)	15.95	(20)	3.01
2.	$2\frac{1}{4}$ O.D. X $1\frac{1}{2}$ I.D.	$211.	(120)	$10.55/FT.	(1) ea.	$1.76
	D.O.M. #1026 WELDED (NUT) MECH. STL. TUBING (DRAWN OVER MANDREL)	177.	(120)	8.85	(5)	1.48
		168.	(120)	8.40	(20)	1.40

MAT'L. STOCK COST (1.) $ 3.01
(2.) 1.40
$ 4.41 ← TUBE ASSEMBLY JUST IN MAT'L COST
MACHINING SHOP COST NOT INCLUDED.

APR 0 2 1998

TYP. WASHER SIZES

WASHER (AMERICAN NAT'L. STANDARD TYPE B)
(PLAIN) (TYPE A HAS BEEN DISCONTINUED)

1. 1"Ø SIZE WASHER - $1.062^{+.030}_{-.007}$ I.D. X $2.500^{+.030}_{-.007}$ O.D. X .160 THK. (.146/.174 MIN/MAX.)

2. 3/4"Ø SIZE WASHER - $0.812^{+.030}_{-.007}$ I.D. X $2.000^{+.030}_{-.007}$ O.D. X .160 THK. (.146/.174 MIN/MAX.)

3. 1/2"Ø SIZE WASHER - $0.531^{+.015}_{-.005}$ I.D. X $1.250^{+.030}_{-.007}$ O.D. X .100 THK. (.090/.112 MIN/MAX.)